

SPTS '81

Cory2

WASHINGTON, D.C.

April 17-18-19, 1981



Presented by
SATELLITE TELEVISION TECHNOLOGY

Your Hosts:
Susan, Tasha, Kevin and Bob Cooper
Gloria and Rick Schneringer

In preparation for this fifth SPTS event I had the opportunity to go back and review the more than 100 hours of videotape which was shot on location at our past SPTS/SBOC gatherings. It was difficult not to smile as I watched and listened to the participants at the first SPTS, held in Oklahoma City in August of 1979, as they wrestled with both the technical and legal problems **then** facing the new industry. **It is important to keep in mind that only 20 months ago there was no industry here.** There were **NO** home terminals, no home terminal receivers or antennas and LNAs (the then 120 degree units were 'tops') cost around \$2,000 each; wholesale.

MESSAGE



FROM COOP

We expect a crowd of more than 2,000 at this SPTS. There are more than 70 exhibit booths. There are dozens of antennas, receivers and a wide selection of LNAs to select from. **PLUS** - at this SPTS we are exploring the new emergence of Low Power TV; how it relates to our already developed TVRO business. Low Power TV today is about where home satellite TV was two years ago. As a part of your SPTS registration you are receiving a brand new STT Manual; "**The Low Power TV Handbook**". This is our largest and in some ways most ambitious 'manual' to date. Using the good legal foundation of Richard L. Brown and the practical LPTV operating experience of myself at West Indies Video, this new 'manual' will prepare you to enter the world of not only receiving satellite TV but sharing it with neighbors, friends or customers. This is a dramatic expansion of our industry base and one not to be taken lightly.

Back in Oklahoma in 1979 we all worried a lot, on and off camera, about the impact of our industry on the satellite program sources. I am pleased to report to you that at this SPTS you will hear about a hard fought, negotiated legal breakthrough in this area; perhaps the most significant event in this industry since the first SPTS. The pieces are rapidly falling in place for our low-cost satellite revolution to evolve in a healthy manner. I'm glad you're with us and I'm sure you will be totally over-powered by the events of the next three days.

Bob Cooper, Jr.
Satellite Television Technology

1) Lou Dorland
2) Ray Friend

WHY ARE WE HERE?

Everyone is here to learn. We hope. There is no shortage of material and people to learn from. SPTS brings together those who have already made this technology their own and those who are anxious to become an active part of the technology. Many (but not all by any means) of the 'leaders' in the technology appear on our program. Many others are seen via our in-house closed circuit TV coverage from past SPTS/SBOC events. To get the full 'flavor' of this SPTS you will have to carefully apportion your available time between live sessions, the exhibit hall floor, TV coverage on channel two and those informal gatherings which make SPTS so unique an event.

Creating a well balanced program is a tough chore. We admit it. The first SPTS was largely technical. By the second SPTS (held in Miami in February 1980) the intense interest of people who would later become dealers and distributors was evident. The San Jose SPTS, held over the 4th of July weekend in 1980, was one of those rare, probably never to be repeated gatherings. It had just the right balance of technologists, entrepreneurs and a perfect setting for the 500 or so who attended. The memory of SPTS San Jose will long linger. The SBOC '80 event in Houston was another jumping off point. Most of the emphasis was on getting into the business of selling TVRO systems. But it was at Houston, barely weeks after the FCC announced a new TV broadcasting service, that many of us got our first detailed look at Low Power TV.

We are here for this three day (plus) period because this industry seems to be turning itself "over" three times each year. Each new SPTS brings out a whole new generation of receivers, LNA pricing, and antenna technology. Each new SPTS brings out new problems and new solutions to past problems. Technology rushes ahead and the legal framework under which we all endeavor to operate plods along behind.

It will be at **this SPTS** that you will learn the first details of an exciting breakthrough in the 'legal area' of home TVRO reception. You will be pleased with what you hear. You will also learn that while our trade association, SPACE, has been hard at work creating these new breakthroughs in legal use of satellite signals "privately" that our "legal problems" are by no means over or past us. Rather they are probably just now beginning in earnest and we can expect direct attacks on the home reception industry in this year's new Congressional session.

We are in Washington for this SPTS because this is the right place to be at this time. The industry cannot hide from its own growth or success. We must meet the issues head on and we must find solutions. Please endeavor to keep these double objectives in mind as you circulate at SPTS. Yes, the technology is exciting. Yes, the marketing possibilities are endless. BUT - none of this will amount to anything significant in the long term without our ongoing efforts to carve out a proper, legal framework for our activities. Everyone attending this SPTS is a pioneer. We must all pioneer together in **all** areas or in short order none of us will pioneer at all. Enjoy yourself.

THURSDAY APRIL 16th



THURSDAY is set up day. Under our arrangements with The Shoreham Hotel the exhibitors and STT personnel charged with the responsibility of getting all of the pieces together have only this single day to get it all operational. This is a busy day and more than half of the attendees will probably check in on this day. If you are amongst that group, here is some advice. First, feel free to go out to the parking lot and **inspect** the efforts involved with setting up the reception terminals. **BUT - please hold your questions** until Friday. The people involved in making this whole operation come together really have their hands full today! Television. When you check into your room here at the Shoreham, turn on your in-room TV set. **Check channel two.** By mid afternoon (3 PM) Thursday you should find some 'preview' features running interspersed with announcements there. There is an excellent in-room TV schedule today dealing with past SPTS/SBOC discussions of marketing private terminal hardware.

There are no "live" scheduled events today at the Shoreham. S.P.A.C.E. (the Society of Private and Commercial Earth terminals) does have a reception and cocktail party scheduled for 5 PM today. Check with SPACE representative for details.

TELEVISION

(Channel Two - In Your Room)

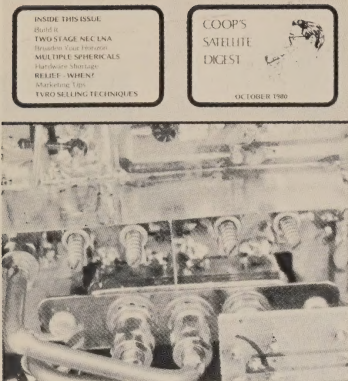
While you are getting the lay of the land here at SPTS '81 Washington we suggest you set aside a few hours this evening to watch television; channel 2 in particular. Our in-house service features a look at how private home terminal marketing developed from the first announcement in April 1979 by Scientific Atlanta that it would offer home terminals (HOMESAT[®]) to the public. Remember - this was but two years ago!

- 7 PM** - "Coops's Satellite Magazine" featuring guest Dick Campbell from Scientific Atlanta and the **first** public announcement of home terminals.
- 8 PM** - "Private Terminal Marketing" from SPTS '79 - Dick Campbell, S/A.
- 8:50** - "Private Terminal Marketing" from SPTS '79 - Clifton Gardiner, GCC
- 9:40** - "Motel/Hotel/Condominium Marketplace" from SBOC '80 - Tom Humpheries, MA-COM
- 10:30** - SPTS Triple SSS 'Out-Take Show' - adult viewing (R rated)

FRIDAY APRIL 17th

FRIDAY IS WHEN IT ALL BEGINS. The first event up is on television. Taped programs begin at 7 AM. Our regular "Today At SPTS", done live and with more than the usual flubs, starts around 8 AM on channel 2. Tune in to find out what is happening today, and how events that have happened in the past days or weeks will re-shape our attention here at SPTS '81 Washington. This is a 'l-o-n-g' day; you'll not get to bed very early unless you simply tire easily. Be prepared for an endurance run!

TELEVISION (Channel Two)



- 7 AM** - "Bringing TV To The West Indies" (WIV-TV)
7:10 - Putting history into perspective - "Today At SPTS '80" (San Jose 7-4-80)
8 AM - "TODAY AT SPTS '81 WASHINGTON" (live)

- 5 PM** - "Spherical Antenna Design" (SPTS '80 San Jose)
5:50 - "Planning The Private Terminal Installation" (SPTS '80 San Jose)

- 10 PM** - "Low Power Broadcast TV Challenge" (SBOC '80 Houston)
10:50 - SPTS Triple SSS 'Out-take Show' (Adult viewing)

LIVE

- 9:55 AM** - The Coopers (Susan and Bob) Welcome You To SPTS '81 Washington
10:00 AM - "How The Satellite System Works", Professor H. Taylor Howard, Stanford University (President of S.P.A.C.E.)
10:50 AM - Congressman Charles Rose (D.NC) addresses the promise of new technology.
11:10 AM - "The Satellite Programming Issue" moderated by Dr. Alan Pearce (international telecommunications economist), Fritz Attaway (VP of Motion Picture Association of America), Richard L. Brown (VP of S.P.A.C.E.).
12:15 PM - **EXHIBIT HALLS OPEN** (to 2:15 PM)
2:30 PM - Note: Between 2:30 and 5:20 there will be twin (parallel) sessions in the Regency Ballroom **and** the Ambassador Room. "General interest" sessions will be in the Regency; "Technical interest" sessions will be in the Ambassador.

Regency - "The Dealer Dilemma" (or, 'How Do I Begin As A Dealer?') with David MacZura of SATFINDER, INC. (Tulsa, OK)

Ambassador - "TVRO Antenna Technology", a panel of experts chaired by Taylor Howard.

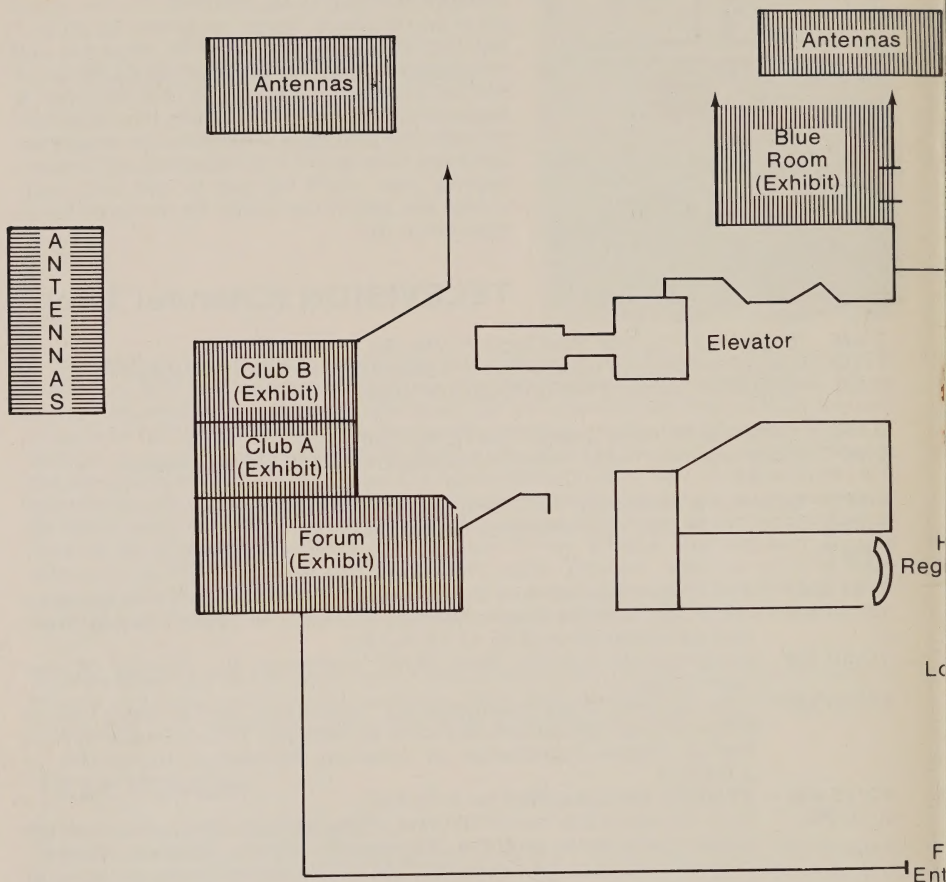
- 3:30 PM** - **Regency** - "The Distributor Dilemma" (or, 'The Marketing Opportunities') chaired by Dave Fedric (National Microtek) will Bill Tillson ('Portable Downlink Rental Opportunities') of NETCOM International, Inc. and Horton Townes ('Low Cost Terminal Marketing') of National Microtek.

Ambassador - "TVRO LNA Technology", a panel of experts chaired by Taylor Howard.

- 4:30 PM** - **Regency** - "The Basis For Low Power TV" chaired by Ike Blonder (Blonder-Tongue Labs, Inc.) with Commissioner James Quello (FCC), Milt Davis (President, National Translator Assn.), I. S. 'Sruki' Switzer (Switzer Engineering Services).

Ambassador - "TVRO Receiver Technology", centering on single conversion image reject mixer receivers and other new receiver technology, chaired by Taylor Howard.

- 5:30 PM** - **EXHIBIT HALLS OPEN** (to 7:45 PM)
8:00 PM - **Regency** - Annual Meeting of Society for Private And Commercial Earth terminals (members and others interested in SPACE welcome).



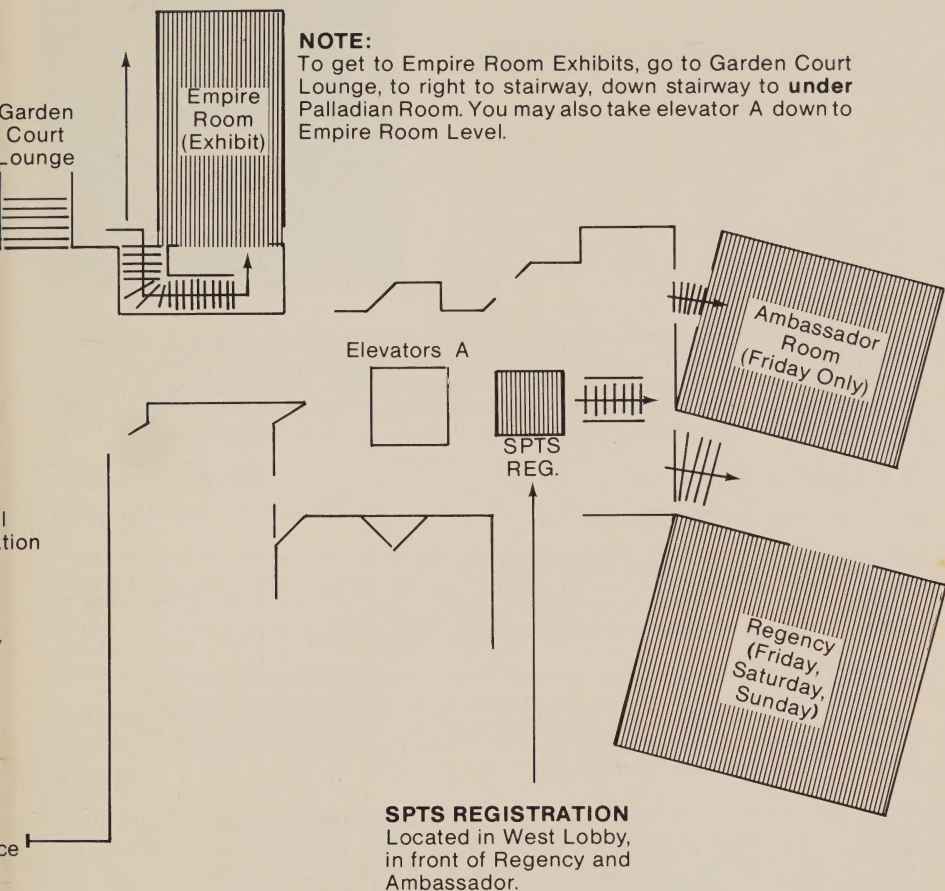
SPTS '81

Exhibit Hours

Friday, April 17: 12:15 PM to 2:15 PM; 5:30 PM to 7:45 PM

Saturday, April 18: 9:00 AM to 10:45 AM; 12:30 PM to 7:30 PM

Sunday, April 19: 9:00 AM to 11:45 AM; 2:00 to 3:00 PM (Optional with Exhibit)



WASHINGTON

SPTS '81 WASHINGTON

All Booths 10' Wide by 8' Deep

ANTENNA NOTES

- 1) For antenna runs to Club 'A', 'B' and Forum

Club 'B' - 60' to 120'
Club 'A' - 90' to 150'
Forum - 110' to 170'

- 2) For Overflow Area - add 75' to 150'

- 3) Antenna Area "B" - primarily for static (non-operable) or self-contained (with receivers, monitors, et al) or to feed Blue Room. BUT - antenna/trailer et al. **MUST** be able to move through passage way that has minimum width of 8' and minimum height of 7 feet (i.e. maximum height clearance is 7 feet in getting from driveway to 'B').

Antenna Area B
[See Note]

Antennas
C
[see note]

Antenna Note C - This spot for 1 or 2 antennas to feed Blue Room. User of this spot must be able to clear same 7' height restriction noted for Antenna Area B. This is a grassy knoll area with center prominence. Antenna run to Blue Room 180'-250'. This antenna must share with others in Blue Room.

Antenna Area For F1 through C3 - room for 15 antennas associated with exhibits in Club 'A', 'B' or Forum.

W3

F1

Blue Room
25 Booths

OVERFLOW antenna area - for Club 'A', 'B', Forum. Visibility varies C3 west to perhaps F2.

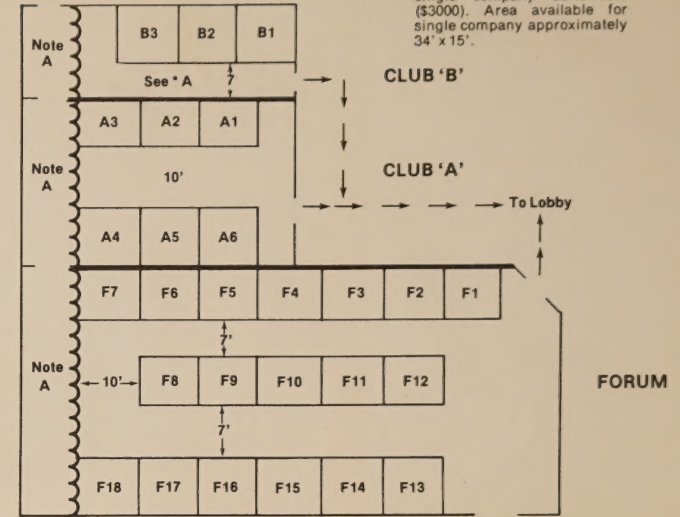
Club 'B'
3 booths [*]

Club 'A'
6 booths

Forum
18 booths

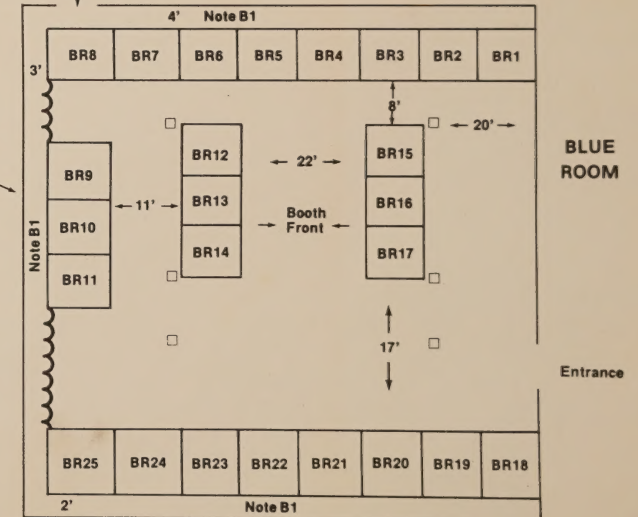
NOTE A:
An area 6 to 8 feet wide is reserved on east end of Club 'A', 'B', and Forum to run cables to booths; behind curtains.

Cables From
Antennas [no
Traffic]



*A - Available as 3 booths separately (\$750 each) or as single company suite-room (\$3000). Area available for single company approximately 34' x 15'.

Probable
Cable Entrance [no
traffic]

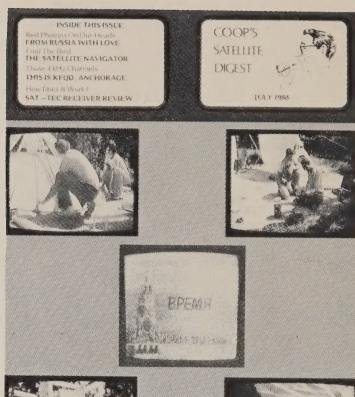


NOTE B1:
An area 2-4 feet wide is reserved around south, east and north side of Blue Room for running of cables.

BLUE ROOM

Entrance

SATURDAY APRIL 18th



This is your day to become totally involved with the technology and excitement of the satellite world. There are more than 70 exhibit booths awaiting you. Now should you have a few minutes to spare, here is the television schedule for the day. Emphasis is on the technical aspects of this industry featuring some of the best minds of the industry. If you brought your own VTR, let it run for all 12 hours of TV today!

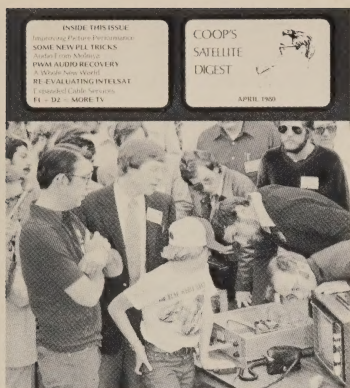
TELEVISION

(Channel Two - In Your Room)

- 7 AM** - "Bringing TV To The West Indies" (WIV-TV)
- 7:10** - Putting history into perspective - "Today at SPTS '80" (San Jose 7-05-80)
- 8 AM** - "TODAY AT SPTS '81 WASHINGTON" (live)
- 9 AM** - "Molniya (Russian Satellite) Reception Techniques" (STT)
- 2 PM** - How pros design receivers "New Breed Receivers" (CCOS 78)
- 2:50** - More pros on receivers "Traditional TVRO Receivers" (CCOS 78)
- 3:40** - Staying out of trouble "System Design Considerations" (CCOS 78)
- 4:30** - Avoiding sparklies "Interference & Terrestrial Studies" (SPTS 79)
- 5:20** - "Terrestrial Interference" (SPTS '80 Miami)
- 9 PM** - Do it right "LNA Installation Considerations" (CCOS 78)
- 9:35** - "LNA Design & User Parameters" (SPTS '79)
- 10:25** - "LNAs and Front End Technology" (SPTS '80 Miami)
- 11:15** - "4 GHz Amplifier Techniques" (SPTS '80 San Jose)
- 12 M** - SPTS Triple SSS 'Out-Take' Show (adult viewing)

LIVE

- 9:00 AM** - Board of Directors Meeting for S.P.A.C.E. (meeting room to be announced)
- EXHIBIT HALLS OPEN** (to 10:45 AM)
- 11:00 AM** - Ralph Nadar (Regency)
- 12:30 PM** - **EXHIBIT HALLS OPEN** (to 7:30 PM)
- 2:00 PM** - **Exhibit Halls Open to General Public** (to 6 PM)
- 8:00 PM** - "The Promise Of Low Power TV - The Practical Side", featuring Michael Couzens (formerly with FCC), David Brough (pioneer Canadian LPTV operator), Perry Teasdale (pioneer US LPTV operator and FCC consultant on LPTV) with Bob Cooper as moderator. (Regency)



SUNDAY APRIL 19th

SUNDAY is the final day of the seminar and we recognize that as you count down your last hours you may have several things you want to get done before shop closes. This is why we have scheduled a three hour exhibit period first today (from 9 AM to noon). Then in two sessions of one hour each we wrap the events that brought you here.

TELEVISION

(Channel Two - In Your Room)

For those who missed the opening day activities, SPTS '81 Washington offers three of the important sessions that were conducted 'live' on Friday, April 17th.

7 AM - "Bringing TV To The West Indies" (WIV-TV)

7:10 - "Canadian Use of TVROs/David Brough" (Coop's Satellite Magazine 4-79)

8 AM - "TODAY AT SPTS '81 WASHINGTON" (live)

9 AM - "How The Geo-Stationary Satellite System Works" (SPTS '81; 4-17-81 at 10 AM)

10 AM - "The Distributor Dilemma" (SPTS '81; 4-17-81 at 3:30 PM)

11 AM - "The Dealer Dilemma" (SPTS '81; 4-17-81 at 2:30 PM)

LIVE

9:00 AM - **EXHIBIT HALLS OPEN** (to 11:45 AM)

12:00 PM - "Low Power TV - How To Plan It" (or, 'How Much Does It Cost?'), a panel chaired by Ike Blonder (Blonder-Tongue Labs), with Dr. B. W. St. Clair (Television Technology Corporation), Frank Mestre (Continental Electronics) and Bob Cooper. (Regency)

1:00 PM - "Going Home Smarter" (or, focusing on what we have learned and seen here), a panel chaired by Richard L. Brown.

2:00 PM - "Last Chance - Exhibits" (to 3 PM). **Note:** Optional with exhibitors.

THE EXHIBITIONS

Sooner or later everything that excites you here boils down to the equipment and services; now available or to be available in the future. **This is the largest single assembly of satellite receiving equipment.** Ever. Anyplace in the world. In other words, if it is legitimately available on the marketplace...it is here.



AVCOM OF VIRGINIA, INC. - 500 Research Road, Richmond, VA 23235 (804-794-2500). Total systems. Andy Hatfield, Pat Hatfield. Booth F-4 in Forum.

ANTENNA DEVELOPMENT & MANUFACTURING, INC. - Hwy. 67 South, P. O. Box 1178, Poplar Bluff, MO 63901 (314-785-5988). Total systems. James Gowen, Linda Gowen, David Shumate. Booth F-3 in Forum.

ADVANCED ELECTRONICS - 5079 Arville St., Las Vegas, NV 89118 (800-634-6047). Total systems. Jeff Stouffer, Howard Wilson, Ron Runswick, Pam Bear, Doug Dehnert, Kim Dehnert, Dave Shumate. Booths F-1 and F-2 in Forum.

BIRDVIEW SATELLITE COMMUNICATIONS, INC. - P. O. Box 963, Chanute, KS 66720 (316-431-0400). Total systems. Charles Ross, Gunilla Ross, Robert Owens. Booth ER-8 in Empire Room.

BOB LULY AND ASSOCIATES - P. O. Box 2311, San Bernadino, CA 92406 (714-888-7525). Antennas. Bob Luly. Booth ER-7 in Empire Room.

COMM/PLUS - 3680 Cote Vertu, St. Laurent, Quebec, Canada H4R-1P8 (514-337-7255). Antennas, LNAs and Receivers. C. J. Schultheiss, D. Bernesi, Gloria Bernesi, M. Jurgenliemb, D. Lester. Booths BR-13 and BR-14 in Blue Room.

COMSEARCH, INC. - 7633 Leesburg Pike, Falls Church, VA 22043 (703-356-9470). LPTV engineering service. Jerry Schulman, Mike Morin, Harry Stemple. Booth ER-11 in Empire Room.

COMTECH ANTENNA CORP. - 3100 Communications Road, St. Cloud, FL 32769 (305-892-6111). Total systems. George Cirutis, Glenn Higgins. Booth BR-6 in Blue Room.

COMTECH DATA CORPORATION - 613 S. Rockford Drive, Tempe, AZ 85281 (602-968-2433). Receivers. Robert L. Miller, Bill Merkes, Jeannine Griffin. Booth BR-4 in Blue Room.

COSMIC TECHNOLOGY, INC. - 3102 W. Lewis, Phoenix, AZ 85009 (602-245-1696). Total systems. Ralph Heller, Steve Crowe, Ray Carli. Booth ER-13 in Empire Room.

DEXCEL, INC. - 2285C Martin Avenue, Santa Clara, CA 95050 (408-727-9833). LNAs, receivers. Art Kawai, Yozo Satoda, Mike Fornaciari. Booth BR-5 in Blue Room.

DEEP SPACE COMMUNICATIONS, INC. - Route 1, Box 351A, Chancellor, AL 36316 (205-393-3211). Total systems. Dave Braswell, Frank Lambert, Margaret Braswell. Booth ER-9 in Empire Room.

DOWNLINK, DIV. OF B AND W ENTERPRISES, LTD. - Park St., P. O. Box 33, Putnam, CT 06260 (203-928-3869). Total systems. Portus Barlow, Kathy Barlow, Sue Suick, Mark Kulaga, Pete Aucoin, Neil Cunningham, John Nowlan, Ted Baginet. Booths BR-16, 16-A, 17 and 17-A in Blue Room.

EARTH STATIONS, INC. - Hwy. 22, Barling, AR 72923 (501-452-4391). Total systems. A. B. Richmond, Stanley Johnson, Bob Beaty. Booth BR-8 in Blue Room.

EARTH TERMINALS - Rochester Office, P. O. Box 636, Fairport, NY 14450 (716-224-7457). Receivers. Clyde Washburn, James Jaeger, Stephen Corwin. Booth BR-9 in Blue Room.

GILLASPIE AND ASSOCIATES - 177 Webster St., A455, Monterey, CA 93940 (408-372-4771). Total systems. Norman Gillaspie, Lydia Gillaspie, Werner Vauken, Sherry Vauken. Booth ER-4 in Empire Room.

GLOBAL TV ELECTRONICS - P. O. Box 219, Maitland, FL 32751 (305-628-2088). Total systems. Stephen Reed, John Reed, Scott McNealus. Booth BR-7 in Blue Room.

H AND R COMMUNICATIONS (STAR VIEW SYSTEMS) - Route 3, Box 103G, Pocahontas, AR 72455 (800-643-0102). Total systems. John Hastings, Virgil Richardson, Randy Thompson, Ann Hastings, Mary L. Richardson, Larry Poe. Booths 1 through 4 in Club B.

HERO COMMUNICATIONS - 1783 West 32nd Place, Hialeah, FL 33012 (305-887-3203). Total systems. Bob Behar. Booths F-5 and F-6 in Forum.

HOME SATELLITE TV, INC. - Route 3, Box 135, Prince George, VA 23875 (804-733-5424). Total systems. John Wilson, Tom Price, Tim Rogers. Booth F-7 in Forum.

HOOSIER ELECTRONICS, INC. - P. O. Box 3300, Terre Haute, IN 47803 (812-238-1456). Total systems. Stephen M. Bland, Norma Bland, Jeff Vicars. Booth ER-2 in Empire Room.

ICON ELECTRONICS CO. - 333 McPhillips St., Winnipeg, Manitoba, Canada R3E-2K9 (204-284-1703). Receivers. Willard Elliott, Brenda Hill. Booth ER-14 in Empire Room.

INDRA SATELLITE COMMUNICATIONS, INC. - P. O. Box 1118, Scottsdale, AZ 85252 (602-994-3435). Receivers. Arun Pande, William K. Delaney, Ray Carli. Booth ER-5 in Empire Room.

KLM ELECTRONICS, INC. - 17025 Laurel Road, Morgan Hill, CA 95037 (408-779-7363). Total systems. Peter J. Dalton, Nils N. Museaus, David Barker. Booth BR-23 in Blue Room.

LINDSAY SPECIALTY PRODUCTS LTD. - 50 Mary Street West, Lindsay, Ontario, Canada K9V-4S7 (705-324-3709). Total systems. John Thomas, Koert Koster, Gord Chamberlain. Booth BR-25 in Blue Room.

MAC/LINE, INC. - W. 3125 Seltice Blvd., Coeur d'Alene, Idaho 83814 (208-765-0909). Antennas, controls. Charles A. McDonald, Joseph H. Berube, Pat McDonald. Booth BR-1 in Blue Room.

MERRIMAC INDUSTRIES, INC. - 41 Fairfield Place, West Caldwell, NJ 07006 (201-575-1300). Receivers, signal splitters, down converters. Dan Brodow, Alan Egger, Gene Niemiec. Booth ER-12 in Empire Room.

MICRODYNE - 491 Oak Road, Ocala, FL 32672 (904-687-4633). Receivers, Antennas. Dave Alvarez. Booth F-13 in Forum.

MICROWAVE ASSOCIATES COMMUNICATIONS (M/A COM) - 11211 Katy Freeway, Suite 215, Houston, TX 77079 (713-827-0303). Total systems. Tom Humphries, Ken McKee, Charles Stanton. Booth F-12 in Forum.

MID-AMERICA VIDEO CORP. - 324 W. Pershing Blvd., P. O. Box 511, North Little Rock, AR 72115 (501-753-3555). Total systems. Gene Mullenax, Hubert Smith, Tom Hunt, Don Greenwell. Booths F-14 and F-15 in Forum.

NATIONAL MICROTECH - P. O. Box 417, Grenada, MS 38901 (800-647-6144). Total systems. Dave Fedric, Horton Townes, John Grantham, Billy Ferguson, Don Vance, Johnny Byford, Olivia Anthony, Carol Hendrix, Debra Ward, Kenny Weaver. Booths 1 through 6 in Club A.

NORSAT SYSTEMS - Box 232, Surray, B.C., Canada V3T-4W8. Receivers. Rod Wheeler. Booth F-8 in Forum.

SATFINDER SYSTEMS - Division of Rieco Electronics - 6541 E. 40th St., Tulsa, OK 74145 (918-664-4466). Total systems. Dave MacZura, Anita MacZura, Larry James, Jim Mackerelle. Booths F-9 and F-10 in Forum.

SATELCO - 5540 W. Pico Blvd., Los Angeles, CA 90019 (213-931-6274). Total systems. Sam Kleinman. Booth ER-10 in Empire Room.

SATELLITE ELECTRONIC SYSTEMS - P. O. Box 14418, Hartford, CT 06114 (203-589-0473). LNAs. Rick Leers, Jay Gates. Booth BR-2 in Blue Room.

SATELLITE TECHNOLOGY SERVICES, INC. - 11684 Lilburn Park Road, St. Louis, MO 63141 (800-325-4058). Total systems. Jim Rothbarth, Don McClaughtin, Dave McClasky. Booth BR-3 in Blue Room.

- SATELLITE TELEVISION TECHNOLOGY, INC.** - P. O. Box G, Arcadia, OK 73007 (405-396-2574). TVRO, LPTV publications, manuals, charts. Susan Cooper, Gloria Schneringer. Booths BR-18 and BR-19 in Blue Room.
- SATELLITE TV SERVICES, LTD.** - 4515 Willard Avenue #A, Chevy Chase, MD 20015 (301-652-5333). Total systems. Richard Wells, O. D. Page, John Thompson. Booth BR-10 in Blue Room.
- SATELLITE VIDEO SYSTEMS** - P. O. Box 673, Cabot, AR 72023 (501-843-2186). Total systems. Bobby Kaylor, Barbara Kaylor, Winn Spurling, Joan Spurling. Booths F-17 and F-18 in Forum.
- SAT SHARE, INC.** - 7676 Woodway, Suite 210, Houston, TX 77063 (713-789-5913). Total systems. Nelson Thibodeaux, Tom Halfare, E. C. Ming. Booth BR-12 in Blue Room.
- SAT-TEC SYSTEMS, DIV. RAMSEY ELECTRONICS, INC.** - 2575 Baird Road, Penfield, NY 14526 (716-586-3950). Receivers. John Ramsey, Judi Ramsey, Mike Leo. Booth BR-15 in Blue Room.
- SIGMACOM SYSTEMS, INC.** - 111 Industrial Drive, Whitby, Ontario, Canada L1N-5Z9 (416-666-1661). Total systems. Randy Zedic, Mike Taylor, Don Van Alstyne. Booth ER-1 in Empire Room.
- S.P.A.C.E. (SOCIETY OF PRIVATE AND COMMERCIAL EARTH TERMINALS)** - 1920 N Street, N.W., Suite 510, Washington, D.C. 20036 (202-887-0608). Rick Brown and staff. Booth BR-22 in Blue Room.
- SPACE COM INDUSTRIES** - P. O. Box 66, Cape Girardeau, MO 63701 (314-334-2011). Antennas. Ronnie L. Morgan, Dennis Allbright, Charles Perry. Booth BR-24 in Blue Room.
- STAR VISION** - 2356 W. Oak Ridge Road, Orlando, FL 32809. Total systems. Dwight Brewster. Booth ER-6 in Empire Room.
- S.T.V.N.** - 2328 Montgomery St., Silver Springs, MD 20910 (301-587-2215). Total systems. Chip Peake, Joseph Hopkins, Marion F. Peake. Booth BR-21 in Blue Room.
- TELECOM INDUSTRIES CORP.** - 27 Bonaventura Drive, San Jose, CA 95134 (408-262-3100). Receivers. Jim Bertonis, Andy Gibbs, Vinny Finelli. Booth BR-20 in Blue Room.
- VIDIARK ELECTRONICS** - P. O. Box 57, Salem, AR 72576 (501-895-3318). Total systems. H. D. McCullough, John McCullough, Dutch Walker. Booth F-11 in Forum.
- WATKINS-JOHNSON** - 3333 Hillview Avenue, Palo Alto, CA 94304 (415-493-4141). Voltage controlled oscillators. Val Jackson, Hutch Collier, Box Smith. Booth BR-11 in Blue Room.
- ZANDEX COMMUNICATIONS** - P. O. Box 2667, Zanesville, OH 43701 (800-848-0528). Total systems. Paul Fields, Guy Davis, Deborah Fields. Booth F-16 in Forum.

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SPTS '81 OMAHA
Aug. 14-15-16